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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/072,868	02/12/2002	Daniel D. Berns	8350.0537-00	2428
7590	12/23/2003		EXAMINER	
Finnegan, Henderson, Farabow, Garrett & Dunner, L.L.P. 1300 I Street, N.W. Washington, DC 20005-3315			LAWRENCE JR, FRANK M	
			ART UNIT	PAPER NUMBER
			1724	

DATE MAILED: 12/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/072,868	Applicant(s) BERNS ET AL.
	Examiner Frank M. Lawrence	Art Unit 1724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10, 12-31 and 33-40 is/are rejected.
- 7) ☒ Claim(s) 11 and 32 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
 a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____. | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 5, 25 and 28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Each of claims 5, 25, 28 is indefinite because the use of the word "or" creates an improper Markush group because the element following "or" may or may not be a member of the group. To overcome this rejection, "or" should be changed to "and."

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 2, 5, 6, 12, 16, 17, 27-30, 33 and 40 are rejected under 35 U.S.C. 102(b) as being anticipated by Reintjes et al. (5,572,320).
5. Reintjes et al. '320 teach a system for *in situ* particle counting in an automobile engine lubrication system, comprising an external pump (16), a flow conduit (14) for supplying and removing fluid from the system, an optical particle counter (26) for analyzing particle size in the conduit, a cable (28) for transmitting count data to a computer to produce a histogram, and a timing clock for controlling sampling durations (figure 1, col. 1, lines 10-55, col. 2, lines 20-39, col. 3, lines 6-27).

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6. Claims 1, 2, 5-7, 9, 10, 12-19, 21, 22, 24-31, 33-38 and 40 are rejected under 35 U.S.C. 102(b) as being anticipated by Verdegan et al. (5,968,371).

7. Verdegan et al. '371 teach a system for on-line particle counting in an automobile engine lubrication system, comprising an engine (14), an oil circulation loop (20), an external pump (18) for circulating oil and draining to a sump (16), a filter (12) upstream of the pump via the circulation loop, optical particle counting sensors (26, 28, 30) upstream (unfiltered) and downstream from the filter, a controller (22) and timer (48) for controlling sampling, and a display (24) for indicating results to an operator (figure 1, col. 1, lines 5-11, 36-47, col. 7, lines 23-44, col. 9, lines 27-33, col. 10, lines 27-31). The system may be used to indicate the need for a filter change when the particle count is too high, after which a second sampling period will take place with the new filter. The system can indicate imminent catastrophic failure if certain particle counts are too high (col. 4, lines 21-32).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 20, 23 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Verdegan et al. '371.

10. Verdegan et al. '371 disclose all of the limitations of the claims except that there is a second external filter downstream of the pump and that the running of the engine is halted in response to cleanliness characteristics. It would have been obvious to one having ordinary skill

in the art at the time of the invention to modify the filter of Verdegan et al. '371 by using an additional filter in order to provide an increased filtering effect. It is submitted that the multiplying of a structure to achieve an increase in the effect of the structure is an obvious modification, see *St. Regis Paper Company v. Bemis Company, Inc.*, 193 USPQ 8, 10. It would have also been obvious to halt engine operation in response to the indication of imminent catastrophic failure that is taught in the patent in order to prevent excessive damage and maintenance requirements.

11. Claims 3, 4 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Verdegan et al. '371 in view of Niles et al. (4,129,034).

12. Verdegan et al. '371 disclose all of the limitations of the claims except that monitoring is done during operating the engine in a dynamometer test and that the test is halted based on a cleanliness characteristic. Niles et al. '034 disclose a dynamometer test for checking engine power output (col. 1, lines 7-25, 60-64, col. 2, lines 10-57). It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the engine system of Verdegan et al. ('371) by including a dynamometer tester in order to provide a power output test for the engine in working environments such as a moving vehicle. It is submitted that halting the test would be obvious and necessary in the situation where imminent failure is indicated as discussed in paragraph 10 above.

Allowable Subject Matter

13. Claims 11 and 32 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The additional references listed on the attached PTO-892 form disclose particle counting systems.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frank M. Lawrence whose telephone number is 571-272-1161. The examiner can normally be reached on Mon-Thurs 7:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blaine Copenheaver can be reached on 571-272-1156. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-0987.

Frank M. Lawrence
Primary Examiner
Art Unit 1724

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Frank Lawrence
12-9-03